

A New Species of the Genus *Tulipa* (Liliaceae) from China

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ABSTRACT. *Tulipa mongolica* Y. Z. Zhao (Liliaceae) is described from Inner Mongolia, China. The new species is distinguished by its filaments 2.5–3.0 times as long as the anthers. It is related to *T. heteropetala* Ledebour on the basis of its filaments widened from the mid-point down, narrowing on both sides of the filament.

Key words: China, Inner Mongolia, Liliaceae, *Tulipa*.

The genus *Tulipa* L. contains about 150 species, about 14 of which are found in China. Among these there is only one species in Mongolia and Inner Mongolia. The two species *Tulipa heteropetala* and *Tulipa uniflora* (L.) Besser ex Baker have the closest relationship with this new species. The distribution of *Tulipa heteropetala* is in the north of Xinjiang, Siberia, and Central Asia. *Tulipa uniflora* occurs in Siberia and Central Asia.

The new species was referred to *Tulipa heteropetala* in Mao (1980) and *Tulipa uniflora* in Ninbu (1994). After comparing the features among these three species of *Tulipa* the author thought this species was new to science.

The new species was distributed solitarily over a sandy crack of volcanic cone in the XilinGol Meng of Inner Mongolia. The species is now extinct at the type locality because of heavy grazing pressure.

Tulipa mongolica Y. Z. Zhao, sp. nov. TYPE: China. Inner Mongolia: XilinGol Meng, Baiyinxile, 20 May 1979, *Shu-run Liu* 395 (holotype, HIMC; isotypes, HIMC). Figure 1A–C.

Haec species *T. heteropetalae* Ledebour affinis, sed ab ea perianthii segmentis internis oblongo-obovatis, 2.5–4.5 cm longis apice acutis; filamentis 2.5–3.0-plo longioribus quam antheris atque pistillo longiore quam staminibus differt.

Perennial, 10–25 cm tall. Bulb ovate, 1–2 cm diam.; skin of bulb papery, dark brown, pubescent on inner surface; stem glabrous. Leaves 2, closely alternate, narrowly lanceolate, 8–11 cm long, 4–9 mm wide, often curved outward, glabrous. Flower single, terminal; perianth segments 6, in two series of 3, yellow, 2.5–4.5 cm long, 4–8 mm wide, apices

acute; outer perianth segments 3, narrowly oblanceolate, externally green-purple; inner perianth 3, oblong-obovate, same length as above, 8–15 mm wide; stamens 6, in two series with 3 long, to 2.4 cm, and 3 short, to 2.2 cm long; filaments 2.5–3.0 times as long as anthers, yellow, glabrous, widened below their mid-point, gradually narrowed toward both sides; anther yellow, narrowly oblong, 4–6 mm long; pistil exceeding the stamens; style 1 cm long. Fruit and seed not found.

Habitat. On stony hillside fields.

Distribution. Inner Mongolia, XilinGol Meng, Baiyinxile.

Paratype. CHINA. **Inner Mongolia:** same locality as type collection, 8 May 1965, *Zhi-jie Xu* 413 (HIMC).

The chief morphological differences between the new species and two similar species are summarized in the following key couplet. The three species of *Tulipa* also share in common a yellow flower, long style, and pubescence on the top of the inner skin of the bulb.

KEY TO THE THREE *TULIPA* SPECIES IN INNER MONGOLIA, CHINA

- 1a. Only the base of the filaments of stamens widened, narrowing to the apex
. 1. *T. uniflora* (L.) Besser ex Baker
- 1b. Filaments widened from the mid-point down, then narrowing on both sides of the filament.
 - 2a. Stamen filaments equal in length to anthers or slightly longer; pistil shorter than stamens; inner perianth ovate to rhombic, 2–2.5 cm long, apex acuminate; leaves 2, loosely separate
. 2. *T. heteropetala* Ledebour
 - 2b. Stamen filaments 2.5–3.0 times as long as anther; pistil longer than stamens; inner perianth oblong to obovate, 2.5–4.5 cm long, apex acute; leaves 2, closely alternate
. 3. *T. mongolica* Y. Z. Zhao

Paratype. CHINA. **Inner Mongolia:** XilinGol Meng, Baiyinxile, 8 May 1965, *Zhi-jie Xu* 413 (HIMC).

Literature Cited

- Mao, Zu-mei. 1980. *Tulipa*. Pp. 86–97 in *Flora Reipublicae Popularis Sinicae*, Vol. 14. Science Press, Beijing.
- Ninbu. 1994. *Flora Intramongolica*, 2nd ed. Typis Intramongolicae Popularis Hohhot. 5: 469.



Figure 1. *Tulipa mongolica* Y. Z. Zhao. —A. Plant. —B. Skin of bulb. —C. Part of flower.